

Claims

What is claimed is:

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1. A method, comprising:

2

retrieving a first command from a script containing one or more commands

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written for a first color space, the first command associated with zero or

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more input buffers and zero or more output buffers, the first command

5

having zero or more parameters;

6

determining a behavior of the first command in the first color space and in a

7

second color space, the behavior comprising one of unique behavior,

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transparent behavior, and different behavior, wherein the first command

9

has:

10

the unique behavior when the first command only operates in the

11

first color space,

12

the transparent behavior when the first command generates similar

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results in the first color space and in the second color space,

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and

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the different behavior when the first command generates different

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results in the first color space and in the second color space;

17

and

18

processing an operation associated with the first command using the behavior of

19

the first command, wherein the operation is processed in a preferred format

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based on current formats of the input buffers.

1 2. The method of claim 1, wherein the preferred format is determined to minimize
2 color space conversion of the input buffers.

1 3. The method of claim 1, wherein the preferred format is a format used with the
2 second color space when at least one of the input buffers and output buffers is in
3 the format used with the second color space.

1 4. The method of claim 1, wherein processing the first command in the preferred
2 format comprises converting the input buffers to the preferred format.

1 5. The method of claim 1, wherein when the first command has the unique
2 behavior, the preferred format is a format used with the first color space.

1 6. The method of claim 1, wherein when the first command has the different
2 behavior, the first command is transformed to a second command in the second
3 color space, wherein the second command performs a similar operation in the
4 second color space as the first command in the first color space.

1 7. The method of claim 6, wherein if the second command can not perform the
2 similar operation with the zero or more parameters of the first command, the
3 parameters are transformed to comparable parameters for the second command
4 such that the second command performs the similar operation in the second color
5 space as the first command in the first color space.

1 8. The method of claim 7, wherein the comparable parameters are compatible with
2 the preferred format.

1 9. The method of claim 7, wherein if the zero or more parameters of the first
2 command cannot be transformed to comparable parameters for the second
3 command, operate the first command with the unique behavior instead of with the
4 different behavior.

10. A computer readable medium having stored thereon sequences of instructions
which are executable by a digital processing system, and which, when executed by
the digital processing system, cause the system to perform a method comprising:
retrieving a first command from a script containing one or more commands
written for a first color space, the first command associated with zero or
more input buffers and zero or more output buffers, the first command
having zero or more parameters;
determining a behavior of the first command in the first color space and in a
second color space, the behavior comprising one of unique behavior,
transparent behavior, and different behavior, wherein the first command
has:

the unique behavior when the first command only operates in the
first color space,
the transparent behavior when the first command generates similar
results in the first color space and in the second color space,
and
the different behavior when the first command generates different

18 results in the first color space and in the second color space;
19 and
20 processing an operation associated with the first command using the behavior of
21 the first command, wherein the operation is processed in a preferred format
22 based on current formats of the input buffers.

23 11. The computer readable medium of claim 10, wherein the preferred format is
24 determined to minimize color space conversion of the input buffers.

1 12. The computer readable medium of claim 10, wherein the preferred format is a
2 format used with the second color space when at least one of the input buffers and
3 output buffers is in the format used with the second color space.

1 13. The computer readable medium of claim 10, wherein processing the first
2 command in the preferred format comprises converting the input buffers to the
3 preferred format.

1 14. The computer readable medium of claim 10, wherein when the first command
2 has the unique behavior, the preferred format is a format used with the first color
3 space.

1 15. The computer readable medium of claim 10, wherein when the first command
2 has the different behavior, the first command is transformed to a second command
3 in the second color space, wherein the second command performs a similar
4 operation in the second color space as the first command in the first color space.

1 16. The computer readable medium of claim 15, wherein if the second command
2 can not perform the similar operation with the zero or more parameters of the first
3 command, the parameters are transformed to comparable parameters for the
4 second command such that the second command performs the similar operation
5 in the second color space as the first command in the first color space.

1 17. The computer readable medium of claim 16, wherein the comparable
2 parameters are compatible with the preferred format.

1 18. The computer readable medium of claim 16, wherein if the zero or more
2 parameters of the first command cannot be transformed to comparable parameters
3 for the second command, operate the first command with the unique behavior
4 instead of with the different behavior.

1 19. A computer system comprising:
2 a bus;
3 a data storage device coupled to said bus; and
4 a processor coupled to said data storage device, said processor operable to receive
5 instructions which, when executed by the processor, cause the processor to
6 perform a method comprising:

7 retrieving a first command from a script containing one or more commands
8 written for a first color space, the first command associated with zero or
9 more input buffers and zero or more output buffers, the first command
10 having zero or more parameters;

11 determining a behavior of the first command in the first color space and in a

12 second color space, the behavior comprising one of unique behavior,
13 transparent behavior, and different behavior, wherein the first command
14 has:
15 the unique behavior when the first command only operates in the
16 first color space,
17 the transparent behavior when the first command generates similar
18 results in the first color space and in the second color space,
19 and
20 the different behavior when the first command generates different
21 results in the first color space and in the second color space;
22 and
23 processing an operation associated with the first command using the behavior of
24 the first command, wherein the operation is processed in a preferred format
25 based on current formats of the input buffers.

1 20. The computer system of claim 19, wherein the preferred format is determined
2 to minimize color space conversion of the input buffers.

1 21. The computer system of claim 19, wherein the preferred format is a format
2 used with the second color space when at least one of the input buffers and output
3 buffers is in the format used with the second color space.

1 22. The computer system of claim 19, wherein processing the first command in the
2 preferred format comprises converting the input buffers to the preferred format.

1 23. The computer system of claim 19, wherein when the first command has the
2 unique behavior, the preferred format is a format used with the first color space.

1 24. The computer system of claim 19, wherein when the first command has the
2 different behavior, the first command is transformed to a second command in the
3 second color space, wherein the second command performs a similar operation in
4 the second color space as the first command in the first color space.

1 25. The computer system of claim 24, wherein if the second command can not
2 perform the similar operation with the zero or more parameters of the first
3 command, the parameters are transformed to comparable parameters for the
4 second command such that the second command performs the similar operation
5 in the second color space using the comparable parameters as the first command
6 in the first color space.

1 26. The computer system of claim 25, wherein the comparable parameters are
2 compatible with the preferred format.

1 27. The computer system of claim 25, wherein if the zero or more parameters of
2 the first command cannot be transformed to comparable parameters for the
3 second command, the first command is performed with the unique behavior
4 instead of with the different behavior.

1 28. A computer system, comprising:
2 means for retrieving a first command from a script containing one or more

3 commands written for a first color space, the first command associated with
4 zero or more input buffers and zero or more output buffers, the first
5 command having zero or more parameters;

6 means for determining a behavior of the first command in the first color space
7 and in a second color space, the behavior comprising one of unique
8 behavior, transparent behavior, and different behavior, wherein the first
9 command has:

10 the unique behavior when the first command only operates in the
11 first color space,
12 the transparent behavior when the first command generates similar
13 results in the first color space and in the second color space,
14 and
15 the different behavior when the first command generates different
16 results in the first color space and in the second color space;
17 and

18 means for processing an operation associated with the first command using the
19 behavior of the first command, wherein the operation is processed in a
20 preferred format based on current formats of the input buffers.

1 29. The computer system of claim 28, wherein the preferred format is determined
2 to minimize color space conversion of the input buffers.

1 30. The computer system of claim 28, wherein the preferred format is a format
2 used with the second color space when at least one of the input buffers and output
3 buffers is in the format used with the second color space.

1 31. The computer system of claim 28, wherein means for processing the first
2 command in the preferred format comprises means for converting the input
3 buffers to the preferred format.

1 32. The computer system of claim 28, wherein when the first command has the
2 unique behavior, the preferred format is a format used with the first color space.

1 33. The computer system of claim 28, wherein when the first command has the
2 different behavior, the first command is transformed to a second command in the
3 second color space, wherein the second command performs a similar operation in
4 the second color space as the first command in the first color space.

1 34. The computer system of claim 33, wherein if the second command can not
2 perform the similar operation with the zero or more parameters of the first
3 command, the parameters are transformed to comparable parameters for the
4 second command such that the second command performs the similar operation
5 in the second color space using the comparable parameters as the first command
6 in the first color space.

1 35. The computer system of claim 34, wherein the comparable parameters are
2 compatible with the preferred format.

1 36. The computer system of claim 34, wherein if the zero or more parameters of
2 the first command cannot be transformed to comparable parameters for the

- 3 second command, the first command is performed with the unique behavior
- 4 instead of with the different behavior.